

IN THE CLAIMS

Kindly replace the claims by the following set of claims:

1-6. (Cancelled)

7. (Currently Amended) A method according to ~~claim 1~~ claim 31, wherein the scheduling comprises scheduling the processor to handle the accumulated data from ~~at least a first one of the connectionsecond channels~~ at least twice before scheduling the processor to handle data from ~~at least a second one of the first connectionchannels~~.

8. (Currently Amended) A method according to ~~claim 1~~ claim 31, wherein scheduling the processor to handle the accumulated data comprises allowing the processor to utilize up to a predetermined amount of processing time for each connectionchannel.

9. (Currently Amended) A method according to ~~claim 1~~ claim 31, wherein the processor does not run an operating system which performs preemption.

10. (Currently Amended) A method according to ~~claim 1~~ claim 31, wherein scheduling the processor comprises having the processor wait without handling data from any of the connectionchannels if all the connectionchannels were scheduled for handling during their respective current cycles.

11. (Currently Amended) A method according to claim 10, comprising measuring the waiting time of the processor in ~~the~~ a first cycle and using the measured waiting time in determining whether to accept handling data from an additional connectionchannel.

12. (Cancelled)

13. (Currently Amended) A method according to ~~claim 1~~ claim 31, comprising processing an entire block of accumulated data of the scheduled connectionchannel responsive to the scheduling.

14-30. (Cancelled)

31. (Currently Amended) A method of scheduling the handling of a plurality of connections, comprising:

accumulating data from a plurality of connections, requiring handling in each cycle of a ~~[[at]] respective predetermined rate~~ cycle scheme of the connection, by a remote access server;

~~determining for at least one of the connections a quality of service level~~ levels of a plurality of the connections; and

scheduling the processor to process data from the plurality of connections in an order determined responsive to relative values of the determined quality of service level ~~levels~~.

32. (Original) A method according to claim 31, wherein the scheduling comprises scheduling the processor to handle data from at least one first connection before handling data from at least one second connection having a lower quality of service level than the at least one first connection.

33. (Original) A method according to claim 31, comprising changing the quality of service level of at least one of the connections while accumulating the data and changing the order of scheduling responsive to the change in the quality of service level.

34. (Cancelled)

35. (New) A method according to claim 31, wherein the plurality of connections connect to the remote access server through separate physical links.

36. (New) A method according to claim 31, wherein the processing time of a connection does not affect the connection operation, provided the connection is processed within its respective cycle.

37. (New) A method according to claim 31, wherein at least two of the plurality of connections have same cycle times beginning concurrently.

38. (New) A method according to claim 31, wherein at least two of the plurality of connections have different cycle times.

39. (New) A method according to claim 31, wherein the processor handles the data of each connection it is assigned, without interruption for handling data of a different connection.

40. (New) A method according to claim 31, wherein scheduling the processor comprises scheduling each connection once during each of its respective cycles.

41. (New) A method according to claim 31, comprising changing the cycle time of at least one of the connections, during its operation.

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42. (New) A method according to claim 31, wherein scheduling the processor comprises scheduling in an order determined responsive to the time remaining until the end of the respective cycle of each of the connections.

43. (New) A method according to claim 42, wherein scheduling the processor comprises scheduling in an order determined responsive to the relative values of the quality of service levels when the time remaining until the end of the respective cycle is substantially the same for a plurality of connections.

44. (New) A method according to claim 31, wherein scheduling the processor comprises scheduling a connection waiting a longest time for processing, when a plurality of connections are otherwise with equal right for processing.

45. (New) A method according to claim 31, wherein scheduling the processor comprises giving precedence to connections having a high quality of service level.

46. (New) A method according to claim 31, wherein determining the quality of service levels comprises accessing a table listing the quality of service level for each connection.

47. (New) A remote access server, comprising:

a plurality of channel drivers which accumulate data from respective channels;

a processor which handles the accumulated data; and

a scheduler which determines for at least one of the channels a quality of service level and schedules the processor to handle data of the channels in an order determined according to the determined quality of service level.

48. (New) A server according to claim 47, wherein the plurality of channel drivers accumulate data from respective separate physical links.

49. (New) A server according to claim 47, wherein the scheduler is adapted to change the handling order responsive to a change in quality of service.

50. (New) A server according to claim 47, comprising a table which lists a quality of service level for each connection.

51. (New) A server according to claim 47, wherein the scheduler schedules the processor to handle data of the channels in an order determined according to the relative quality of service levels of the channels.

52. (New) A method of scheduling the handling of a plurality of connections, comprising:
accumulating data from a plurality of connections, requiring handling in each cycle of a respective cycle scheme of the connection, by a remote access server;
determining for at least one of the connections a quality of service level; and
scheduling the processor to process data from the plurality of connections in an order adjusted responsive to changes in the determined quality of service level.

53. (New) A method according to claim 52, wherein scheduling the processor comprises giving precedence to connections having a high quality of service level.

54. (New) A method according to claim 52, wherein determining a quality of service level comprises determining for each of the connections.